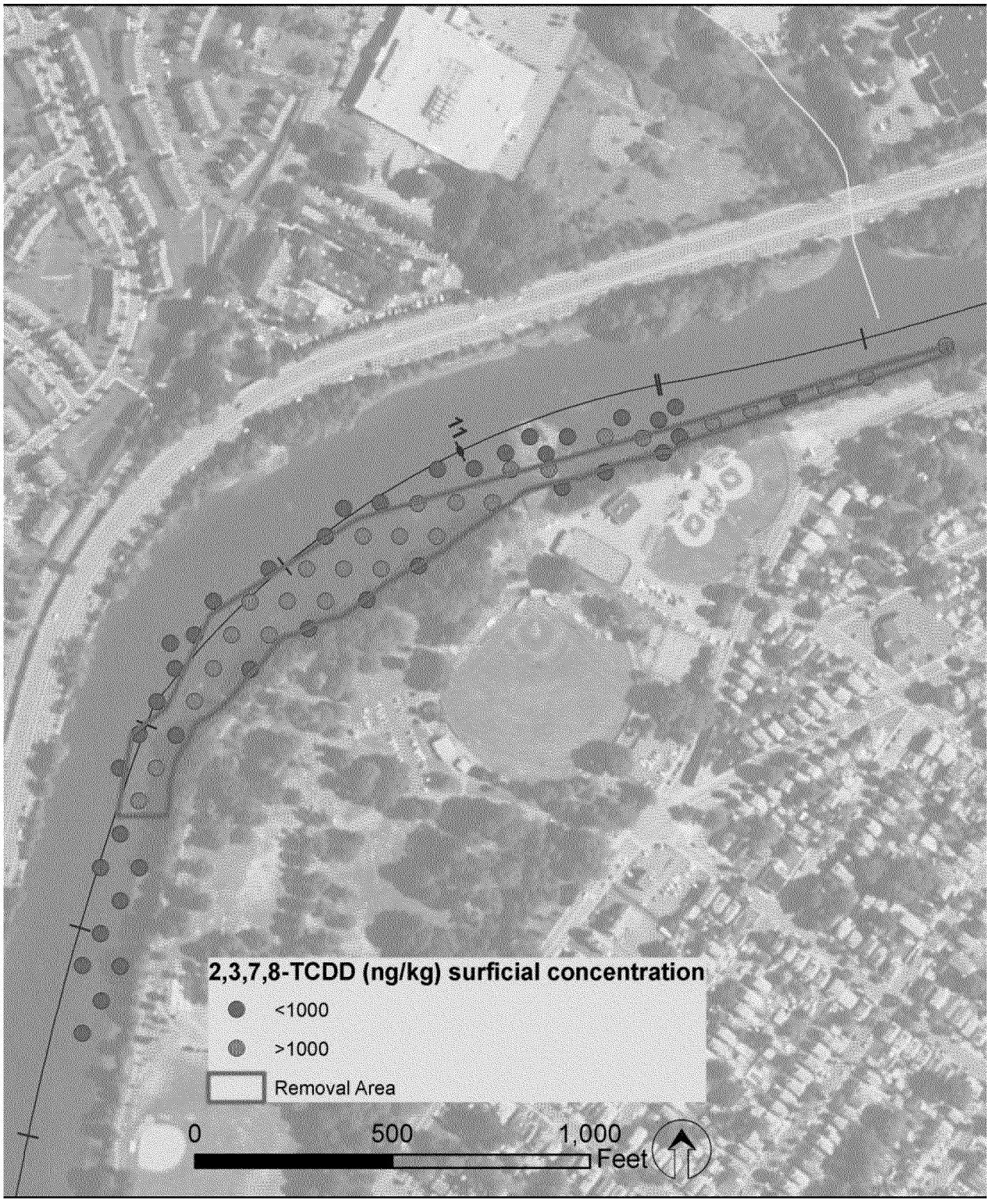

2,3,7,8-TCDD (ng/kg) surficial concentration
<1000
>1000
Removal Area
0
500
1,000
Feet

DAY \\ANTIGONE\PROJ\LOWERPASSAIC\RIVERGRP\412306LOWERPASSAIC\FS\GIS\MAPFILES\RM10-9\FIG4-4_LPR_10-9_UTIL_OUTFALL.MXD ECLARK1 7/25/2012 12:03:05 PM

N

0 50 100 200 300 Feet

Notes:
1. Orthophoto: NJGIS, 2007
2. The Extent of Potentially Exposed Surface Sediment was generated from the -2ft (NGVD29) elevation, which represents the Mean Low Water for this part of the river. The data source was the July 2011 Bathymetry Survey conducted as part of the RM 10.9 Characterization Program (CH2M HILL & AECOM, 2012).

FIGURE 4-4
Utility Locations within RM 10.9 Removal Area
RM 10.9 Removal Action Basis of Design Report
Lower Passaic River Study Area, New Jersey

CH2MHILL

N

0 125 250 Feet

Notes:
1. Orthophoto: NJGIS, 2007
2. The Extent of Potentially Exposed Surface Sediment was generated from the -2ft (NGVD29) elevation, which represents the Mean Low Water for this part of the river. The data source was the July 2011 Bathymetry Survey conducted as part of the RM 10.9 Characterization Program (CH2M HILL & AECOM, 2012).

FIGURE 4-6
Potential Support Area Location
RM 10.9 Removal Action Basis of Design Report
Lower Passaic River Study Area, New Jersey

CH2MHILL

N

0 3,200 Feet

Notes:
1. Image Source: Bing Maps
2. The RM 10.9 Study Area extends from RM 10 to RM 12.

FIGURE 3-4
RM 10.9 Removal Project Bridge Locations
RM 10.9 Removal Action Basis of Design Report
Lower Passaic River Study Area, New Jersey

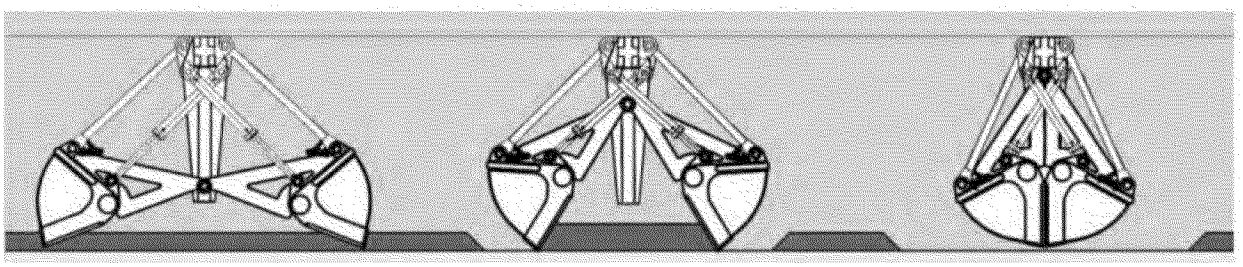
CH2MHILL

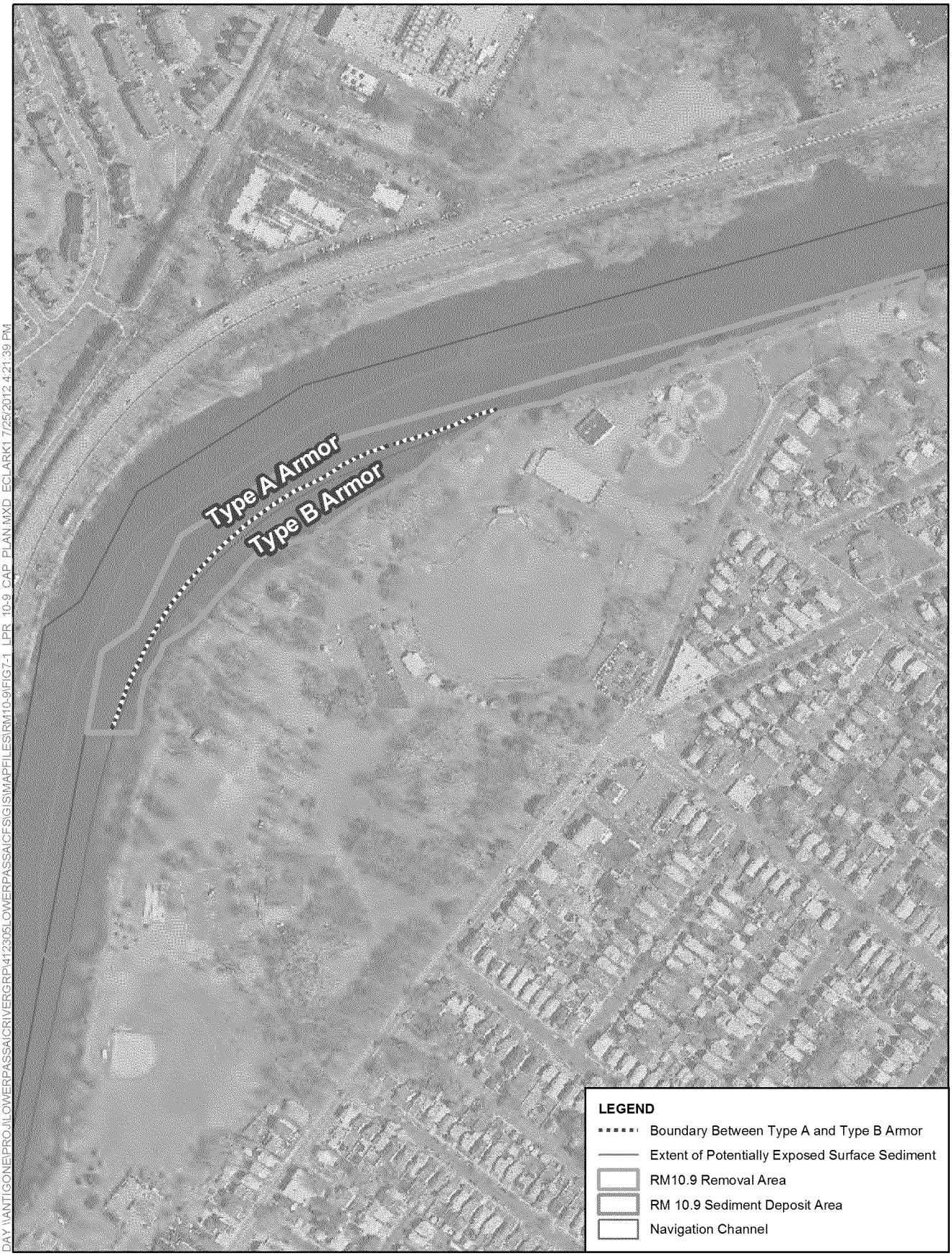
TABLE 4-1

Comparison of Potential Dredging Production Rates

RM 10.9 Removal Action Basis of Design Report, Lower Passaic River Study Area, New Jersey

Process	Production Rate (yd^3/day)
Maximum dredging production (3 yd^3 bucket, 12 hrs/day)	336
Maximum dredging production (3 yd^3 bucket, 24 hrs/day)	672
Maximum dredging production (5 yd^3 bucket, 12 hrs/day)	534
Maximum dredging production (5 yd^3 bucket, 24 hrs/day)	1,069





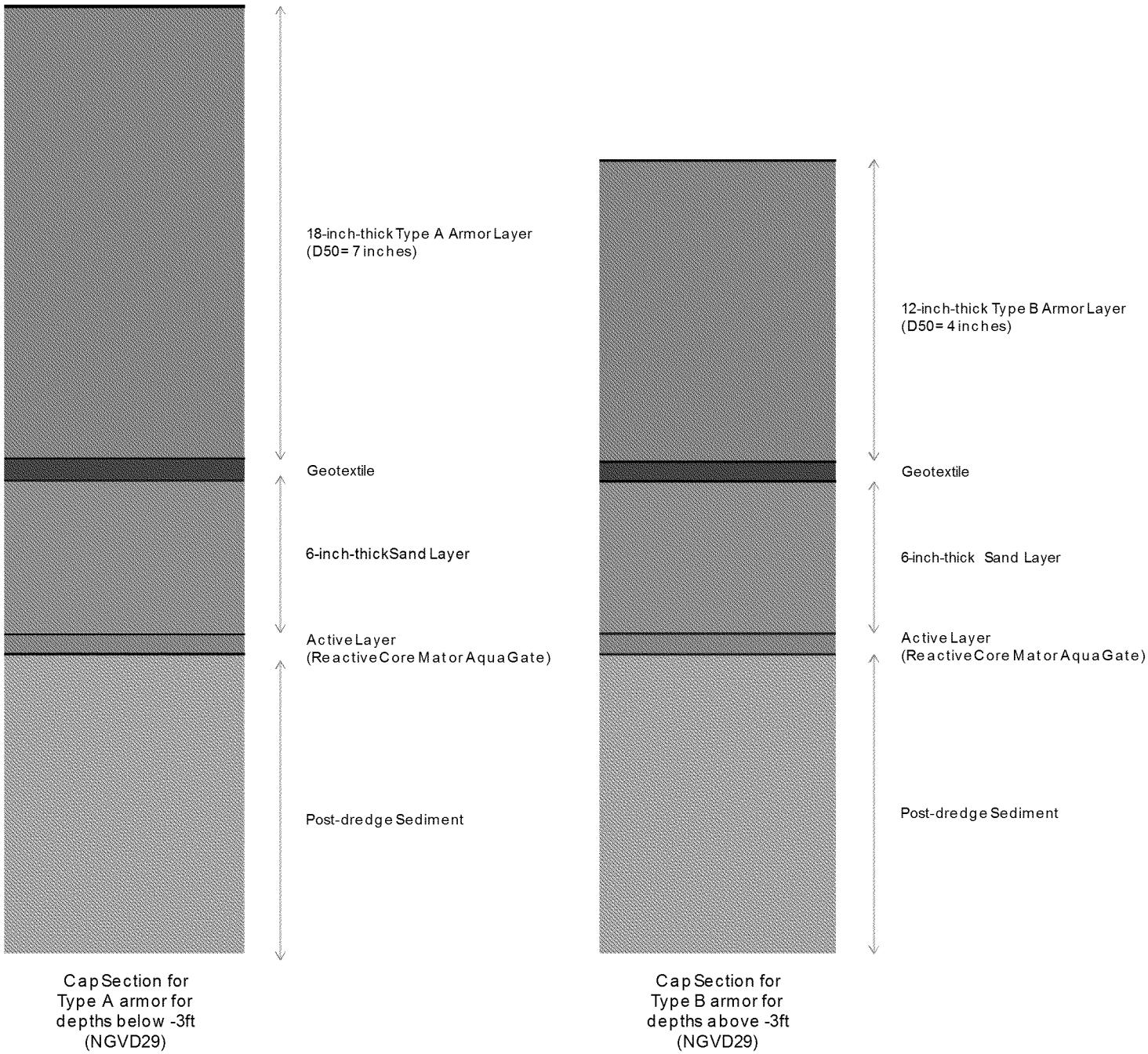
N

0 125 250 Feet

Notes:
1. Orthophoto: NJGIS, 2007
2. The Extent of Potentially Exposed Surface Sediment was generated from the -2ft (NGVD29) elevation, which represents the Mean Low Water for this part of the river. The data source was the July 2011 Bathymetry Survey conducted as part of the RM 10.9 Characterization Program (CH2M HILL & AECOM, 2012).

FIGURE 7-1
Cap Plan
RM 10.9 Removal Action Basis of Design Report
Lower Passaic River Study Area, New Jersey

CH2MHILL

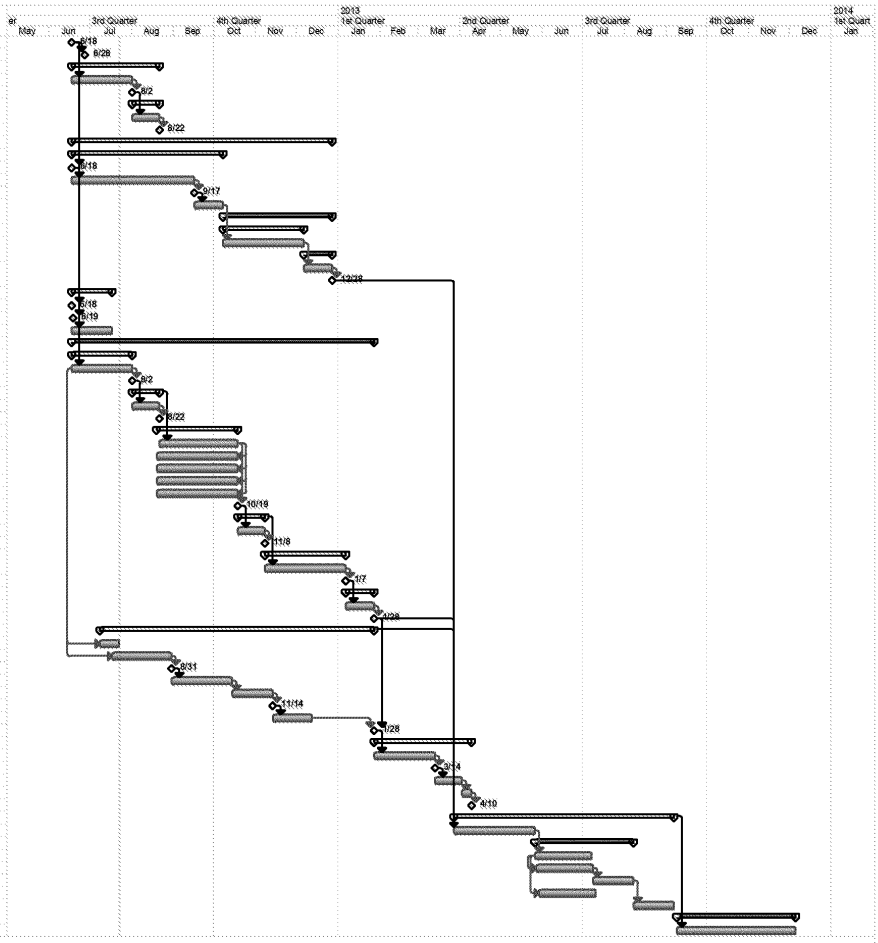


Scale: 1:6

Note: Geotextile and Active Layer are not to scale.

Figure 7-2
Typical Cap Sections
RM 10.9 Removal Action Basis of Design Report
Lower Passaic River Study Area, New Jersey

ID	Task Name	Duration	Start	Finish	Predecessors
1	AOC Effective Date	0 days	Mon 6/18/12	Mon 6/18/12	
2	Notify USEPA of Contractor	0 days	Thu 6/28/12	Thu 6/28/12	1FS+10 days
3	**Removal/Capping Work Plan (RDWP)**	**65 days**	**Mon 6/18/12**	**Wed 8/22/12**	
4	Prepare RDWP	45 days	Mon 6/18/12	Thu 8/2/12	1
5	Submit RDWP to USEPA	0 days	Thu 8/2/12	Thu 8/2/12	4
6	**USEPA RDWP Review**	**20 days**	**Thu 8/2/12**	**Wed 8/22/12**	
7	USEPA RDWP Review	20 days	Thu 8/2/12	Wed 8/22/12	5
8	USEPA RDWP Approval	0 days	Wed 8/22/12	Wed 8/22/12	7
9	**Treatability Testing**	**193 days**	**Mon 6/18/12**	**Fri 12/28/12**	
10	**Bench Scale Testing**	**112 days**	**Mon 6/18/12**	**Mon 10/8/12**	
11	Submit Bench Scale Quality Assurance Project Plan (QAPP)	0 days	Mon 6/18/12	Mon 6/18/12	1
12	Prepare Bench Scale Test Report/Pilot Scale Proposals	91 days	Mon 6/18/12	Mon 9/17/12	11
13	Pilot Scale Decision Document Submitted to USEPA	0 days	Mon 9/17/12	Mon 9/17/12	12
14	USEPA Review & Acknowledgement	21 days	Mon 9/17/12	Mon 10/8/12	13
15	**Pilot Scale Testing**	**81 days**	**Mon 10/8/12**	**Fri 12/28/12**	
16	**Pilot Scale Testing Work Plan**	**60 days**	**Mon 10/8/12**	**Fri 12/7/12**	
17	Prepare Pilot Scale Testing Work Plan	60 days	Mon 10/8/12	Fri 12/7/12	14
18	**USEPA Pilot Scale Work Plan Review**	**21 days**	**Fri 12/7/12**	**Fri 12/28/12**	
19	USEPA Pilot Scale Work Plan Review	21 days	Fri 12/7/12	Fri 12/28/12	17
20	USEPA Pilot Scale Testing NTP	0 days	Fri 12/28/12	Fri 12/28/12	19
21	**Project Plans**	**30 days**	**Mon 6/18/12**	**Wed 7/18/12**	
22	QAPP	0 days	Mon 6/18/12	Mon 6/18/12	1
23	Data Gap & Collection QAPP	0 days	Tue 6/19/12	Tue 6/19/12	1FS+1 day
24	Health & Safety Plan	30 days	Mon 6/18/12	Wed 7/18/12	1
25	**Design**	**224 days**	**Mon 6/18/12**	**Mon 1/28/13**	
26	**Basis of Design Report (BODR)**	**45 days**	**Mon 6/18/12**	**Thu 8/2/12**	
27	Prepare BODR	45 days	Mon 6/18/12	Thu 8/2/12	1
28	Submit BODR	0 days	Thu 8/2/12	Thu 8/2/12	27
29	**USEPA BODR Review**	**20 days**	**Thu 8/2/12**	**Wed 8/22/12**	
30	USEPA BODR Review	20 days	Thu 8/2/12	Wed 8/22/12	28
31	USEPA Approval	0 days	Wed 8/22/12	Wed 8/22/12	30
32	**Pre-Final Design**	**60 days**	**Mon 8/20/12**	**Fri 10/19/12**	
33	Prepare Pre-Final Design Report	58 days	Wed 8/22/12	Fri 10/19/12	29
34	Regulatory Interaction	60 days	Mon 8/20/12	Fri 10/19/12	33FF
35	Prepare Construction Quality Control Plan	60 days	Mon 8/20/12	Fri 10/19/12	33FF
36	Prepare Environmental Management Plan	60 days	Mon 8/20/12	Fri 10/19/12	33FF
37	Prepare Long Term Monitoring, Maintanance & Operation Plan	60 days	Mon 8/20/12	Fri 10/19/12	33FF
38	Submit Pre-Final Design Report & Plans	0 days	Fri 10/19/12	Fri 10/19/12	33
39	**USEPA Pre-Final Design Review**	**20 days**	**Fri 10/19/12**	**Thu 11/8/12**	
40	USEPA Pre-Final Design Review	20 days	Fri 10/19/12	Thu 11/8/12	38
41	USEPA Pre-Final Design Approval	0 days	Thu 11/8/12	Thu 11/8/12	40
42	**Final Design**	**60 days**	**Thu 11/8/12**	**Mon 1/7/13**	
43	Prepare Final Design Report	60 days	Thu 11/8/12	Mon 1/7/13	39
44	Submit Final Design Report	0 days	Mon 1/7/13	Mon 1/7/13	43
45	**USEPA Final Design Review**	**21 days**	**Mon 1/7/13**	**Mon 1/28/13**	
46	USEPA Final Design Review	21 days	Mon 1/7/13	Mon 1/28/13	44
47	USEPA Final Design Approval	0 days	Mon 1/28/13	Mon 1/28/13	46
48	**Procurement**	**203 days**	**Mon 7/9/12**	**Mon 1/28/13**	
49	Identification of Potential Contractors	14 days	Mon 7/9/12	Mon 7/23/12	27SS+21 days
50	Prepare SOW	44 days	Wed 7/18/12	Fri 8/31/12	27SS+30 days
51	Issue RFP	0 days	Fri 8/31/12	Fri 8/31/12	50
52	Contractors Prepare Proposals	45 days	Fri 8/31/12	Mon 10/15/12	51
53	Review Proposals	30 days	Mon 10/15/12	Wed 11/14/12	52
54	Select Contractors	0 days	Wed 11/14/12	Wed 11/14/12	53
55	Contract Negotiations	29 days	Wed 11/14/12	Thu 12/13/12	54
56	Award Contracts	0 days	Mon 1/28/13	Mon 1/28/13	55,47
57	**Subcontractor Project Plans & Submittals**	**72 days**	**Mon 1/28/13**	**Wed 4/10/13**	
58	Prepare Project Plans & Submittals	45 days	Mon 1/28/13	Thu 3/14/13	56
59	Subcontractors Submit Project Plans	0 days	Thu 3/14/13	Thu 3/14/13	58
60	Review Project Plans	20 days	Thu 3/14/13	Wed 4/3/13	59
61	Subcontractors Revise Project Plans	7 days	Wed 4/3/13	Wed 4/10/13	60
62	Project Plans Accepted	0 days	Wed 4/10/13	Wed 4/10/13	61
63	**Construction**	**163 days**	**Thu 3/28/13**	**Sat 9/7/13**	
64	Mobilization	60 days	Thu 3/28/13	Mon 5/27/13	20FS+90 days,47,48
65	**Implementation**	**73 days**	**Mon 5/27/13**	**Thu 8/8/13**	
66	Dredging (17,500 CY @ 3,000 CY/week)	42 days	Mon 5/27/13	Mon 7/8/13	64
67	Treatment/Stabilization	42 days	Tue 5/28/13	Tue 7/9/13	66SS+1 day
68	Capping	30 days	Tue 7/9/13	Thu 8/8/13	67
69	Transportation & Disposal	42 days	Thu 5/30/13	Thu 7/11/13	66SS+3 days
70	Demobilization	30 days	Thu 8/8/13	Sat 9/7/13	68
71	**Final Report**	**88 days**	**Mon 9/9/13**	**Fri 12/6/13**	
72	Prepare Final Report	88 days	Mon 9/9/13	Fri 12/6/13	63FS+2 days



Project: RM 10.9 TCRA
Date: Mon 7/23/12

Task | Split | Progress | Milestone | Summary | Project Summary | External Tasks | External Milestone | Deadline